United Nations TD/B/65(1)/5

United Nations Conference on Trade and Development

Distr.: General
12 April 2018

Original: English

Trade and Development Board
Sixty-fifth session, part I
Geneva, 4–12 June 2018
Item 2 (d) of the provisional agenda

Building resilience to multiple shocks affecting people and sustainable development

Note by the UNCTAD secretariat

Executive summary

This background note outlines the nature and consequences of a variety of shocks that can affect – often simultaneously and symbiotically – the increasingly complex economic, environmental and social systems of today's world. To counter these shocks, it is necessary to build resilience into these systems. This note discusses key features of resilience-building programmes that can be implemented by member States, along with frameworks at the national and international levels that can facilitate this implementation. Policy recommendations are suggested for consideration by the Trade and Development Board.

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Introduction

1. In 2008–2009, many countries and economies entered into a special period in which financial, socioeconomic and environmental problems converged into a triple crisis.[1] This crisis signalled the possibility of a tipping point and might have opened the way for a new, more sustainable and inclusive development. In response, Governments spent about $3.3 trillion on stimulus measures. A substantial part of this spending went into "green" stimulus packages, which boosted investment in renewable energy, energy efficiency, public transport and rail, and electrical grid transmission.[2] The crisis also sparked discussion on reforming the international financial system to increase stability and equity.

2. However, by 2012, this window of opportunity was already drawing to a close. Most green stimulus packages were coming to an end. New packages were pre-empted by austerity measures and accompanying change in political discourse. Public attention refocused on the costs of sustainability transitions, and the idea of a green recovery became politically controversial and receded. Further, the financial crisis and associated bailouts led to even greater concentrations in the financial sector. This was coupled with increasing levels of income and wealth inequality in many economies.[3]

3. Many developing economies were fortunate enough to recover relatively quickly and stabilize towards long-term growth rates, but these apparent displays of economic resilience in the face of shocks often overshadowed the effects suffered by vulnerable and disadvantaged groups. For those struggling to adjust to permanently higher food and fuel prices, and those who may be newly unemployed and do not have access to social protection systems, the effects of shocks and crises continue to be felt. This resilience gap is large and growing.

4. Often, crises and natural disasters may seem too disparate to be related, but they are the result of shocks applied to complex systems that interlink social, economic and environmental factors, and that are characterized by increased connectivity and interdependence through trade and financial flows, dense transport networks and speed of communications. As such, Governments must frequently cope with concurrent, multiple shocks that require more comprehensive and systemic approaches to build resilience. Increased interdependence, while creating opportunities, has also intensified the effects of these shocks. Contagion can spread more rapidly and widely to touch countries, often with devastating effect, that had been untouched by initial shocks.

5. Developing countries, in particular least developed countries, are vulnerable to shocks due to structural weaknesses. A lack of diversity of exports, high dependence on primary commodities, high concentrations of poverty and geographical remoteness will reduce capacities to absorb shocks. However, it is not easy to address the issue of resilience, as all measures required by Governments to build the capacity of their countries to withstand, adapt to and recover from natural disasters and major economic crises – so that their people can continue to lead the kind of life they value[4] – require large investments upfront. Further, building resilience to multiple shocks will require an understanding of the specific vulnerabilities faced by different groups of countries and is a key objective in particular for small island development States, landlocked developing countries and the least developed countries.

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[1] See http://unctad.org/en/pages/PressReleaseArchive.aspx?ReferenceDocId=10791 (accessed 9 April 2018).

[2] E Barbier, 2011, Transaction costs and the transition to environmentally sustainable development, *Environmental Innovation and Societal Transitions*, 1(1):58–69.

[3] For further discussion on shifts in income distribution, see *Trade and Development Report, 2012: Policies for Inclusive and Balanced Growth* (United Nations publication, Sales No. E.12.II.D.6, New York and Geneva).

[4] Resilience as defined in Economic and Social Commission for Asia and the Pacific, 2013, *Building Resilience to Natural Disasters and Major Economic Crises* (United Nations publication, Sales No. E.13.II.F.3, Bangkok), theme study for the sixty-ninth session of the Commission.

6. The outcomes of global conferences, including the 2030 Agenda for Sustainable Development, focus on these challenges in different ways. For example, building resilience is acknowledged across a range of the proposed Sustainable Development Goal targets. Target 1.5 represents the core target: "By 2030 build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters".

7. The remaining sections briefly explore some types of prevalent shock and address the measures needed to build resilience to withstand them.

I. Types of shock affecting economic, environmental and social systems

A. Financial shocks

8. There are four main types of financial shock: banking crises, speculative bubble collapse, currency or exchange rate crises and sovereign debt defaults. In reality, financial crises often mutate from one type to another or show multiple symptoms. For example, the sub-prime crisis that began in 2007 in the United States of America turned into a debt crisis in the European Union, where some member States experienced increased difficulty in borrowing from international markets. Further, at a time of decreased demand, fiscal austerity policies also depressed economic activity and pushed these countries deep into recession.

9. The contagion from the crisis highlighted the extent of integration in financial systems, which increases the potential risks of cross-border transmission of shocks. More highly interconnected financial markets are more susceptible to systemic failures.[5] Much will depend on the structure of the markets and indeed the banking network,[6] as well as a range of factors, including gross domestic product growth, trade openness and stock market capitalization.

10. When the result of a shock is a large systemic financial crisis, one of the main challenges is to anticipate how all participants of the system are likely to act. In practice, markets are highly imperfect and as a result, it is difficult to restore stability to the system.

11. Systemic banking crises can result in major losses and fiscal distress. In the developed countries, these crises usually take the form of large losses in output and increases in public debt. However, developing countries frequently experience weak institutional capacity and limited access to global markets, and tend to experience higher fiscal costs associated with financial sector restructuring.

12. In taking measures to make financial markets more stable and reduce the potential for future crises, Governments and financial regulators need to strike a balance by making the financial system less volatile and vulnerable while not excessively limiting the capacity of capital markets to allocate funds to finance legitimate risk-taking. As a result of widespread financial sector reforms implemented after the 1997 crisis, the 2008 crisis weakened the export capacity of the largest developing countries in Asia. The region proved relatively resilient, as many countries held sound fiscal positions and could afford large stimulus packages.

[5] R Grilli, G Tedeschi and M Gallegati, 2012, Markets connectivity and financial contagion, Università Politecnica Delle Marche, Quaderno di Ricerca No. 382.

[6] F Fornari and L Stracca, 2012, What does a financial shock do? First international evidence, https://academic.oup.com/economicpolicy/article/27/71/407/1786135, *Economic Policy*, pp. 407–445.

B. Price shocks: Commodity prices

13. Commodities are typically characterized by low short-term elasticity of demand so that supply or demand fluctuations result in even greater price changes. As such, commodity prices tend to exhibit higher volatility than prices of manufactures.[7] Further, a range of factors have been identified as contributing to increased volatility in the past decade. As shown in various publications,[8] these include the following:

(a) Variable harvests resulting from increasingly fluctuating weather conditions;

(b) Decreasing inventory levels, reducing responsiveness to demand shocks;

(c) Inaccessibility of new natural resource supplies;

(d) Increasing demand for commodities from fast-growing developing countries;

(e) Increasing demand for biofuels, reducing agricultural output for food;

(f) Rising futures speculation in commodities;

(g) Increased correlation between commodities prices, oil prices being particularly influential.

14. As many least developed countries have commodity-dependent economies, prices can have a significant impact on their economies. Further, highly volatile prices reduce the ability of commodity-dependent countries to maintain steady income and spending. They also diminish Governments' capacities to stabilize current account balances, finance domestic and external debt, and provide social spending aimed at poverty reduction, for example. Volatile commodity prices make it difficult for stakeholders in commodity-dependent economies to plan for investments and production, which increases costs through perceptions of higher country risk, or access to and costs of finance.[9]

15. There are, moreover, close interlinkages between commodity price volatility and food security. Measures to mitigate the adverse effects of the variability of food prices include stockpiling physical commodities and using commodity risk management tools, compensatory financing schemes, commodity exchanges and social safety nets.

16. Speculative investments may have shifted some commodity prices away from the fundamentals.[10] This is suggested by the extent of co-movements among those commodities for which there are futures markets; those without futures markets seem unrelated. High prices of food and fuel threaten food security, increase inflation and lower the rate of poverty reduction. Sudden price moves can also cause a deterioration in the terms of trade, with high output losses.[11]

C. Environmental shocks

17. Climate is involved in most of the shocks that keep or bring households into poverty – notably, natural disasters (such as floods that cause asset loss and disability); health shocks (such as malaria that results in health expenditures and lost labour income); and crop

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[7] Discussion points taken from UNCTAD, 2011, Global crises and the commodity dependence of the least developed countries: Impacts, challenges and the way forward, Special event on commodity dependence and the impact of the multiple global crises on the least developed countries, Fourth United Nations Conference on the Least Developed Countries, Istanbul, 8 May 2011.

[8] CL Gilbert and CW Morgan, 2010, Food price volatility, *Philosophical Transactions of the Royal Society B*, 365(1554):3023–3034; UNCTAD, 2008, *Trade and Development Report, 2008: Commodity Prices, Capital Flows and the Financing of Investment* (United Nations publication, Sales No. E.08.II.D.21, Geneva and New York).

[9] UNCTAD, 2008.

[10] Economic and Social Commission for Asia and the Pacific, 2012, *Economic and Social Survey of Asia and the Pacific 2012: Pursuing Shared Prosperity in an Era of Turbulence and High Commodity Prices* (United Nations publication, Sales No. E.12.II.F.9, Bangkok).

[11] T Becker and P Mauro, 2006, Output drops and the shocks that matter, International Monetary Fund Working Paper No. 06/172.

losses and food price shocks (due to drought or crop disease).[12] Poor people are disproportionately affected, not only because they are often more exposed and invariably more vulnerable to climate-related shocks but also because they have fewer resources and receive less support from family, the community, the financial system, and even social safety nets to prevent, cope and adapt.

18. Climate change will worsen these shocks and stresses, contributing to a decoupling of economic growth and poverty reduction, thereby making it even harder to eradicate poverty in a sustainable manner. Impacts on agricultural production and prices – triggered by either gradual changes in long-term climate trends or more frequent and severe natural disasters – will affect poor people through food production impacts, higher consumption prices and changes in rural incomes. Although development and adaptation cannot prevent all negative impacts from climate change, it is envisaged that through successful implementation of the Sustainable Development Goals, they can prevent or offset many of its effects on poverty by 2030. Nonetheless, development must be rapid and inclusive to reduce poverty and provide poor people with social safety nets and universal health coverage.

D. Conflict shocks

19. Conflict can have a devastating effect across all areas of the economy, destroying human, physical, institutional and social capital and capacities. With regard to the relationship between trade and conflict, the literature is not conclusive.

20. Glick and Taylor (2005)[13] finds a decrease in trade of up to 80 per cent as a result of the world wars, and that the negative and persistent effect of war on trade applies for neutral countries as well. Blomberg and Hess (2006)[14] evaluates the impact of a broader range of violence (including terrorism, external and internal war, interethnic fighting and revolutions) on trade and finds that the presence of violence is equivalent to a 30 per cent tariff on trade. Martin et al. (2008)[15] estimates a negative impact of war on trade, with the effect persisting for more than a decade after war has ceased.

21. However, recent research shows that the effect of conflict on trade may be more nuanced. Kamin (forthcoming)[16] shows that the type and number of conflicts in which the country is involved influences the impact on trade flows, with differing impacts for exporters and importers. It suggests that smaller conflicts between armed groups have a small negative effect for importers only and potentially a positive effect for exporters, whereas aggression towards civilians has a negative impact on trade only for importers. Further, major conflicts reduce trade flows by up to 67 per cent, with higher negative effects experienced by exporters than importers.

E. Impact of shocks on vulnerable groups

22. Specific segments of the population are especially vulnerable to shocks. Women and children, persons with disabilities and the elderly are all affected to a greater degree by shocks. Those already disadvantaged are likely to be hit hardest by economic crises and natural disasters and often lack the requisite social protection. For example, girls are the first to be taken out of school during crises, and women come under further pressure after a disaster, due to their traditional responsibilities for caring for children and the elderly.

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[12] Discussion taken from Economic and Social Commission for Asia and the Pacific, 2012; and World Bank, 2016, *Shock Waves: Managing the Impacts of Climate Change on Poverty* (Washington, D.C.).

[13] R Glick and AM Taylor, 2005, Collateral damage: Trade disruption and the economic impact of war, National Bureau of Economic Research Working Paper No. 11565.

[14] SB Blomberg and GD Hess, 2006, How much does violence tax trade? *Review of Economics and Statistics*, 88(4):599-612.

[15] P Martin, T Mayer and M Thoenig, 2008, Make trade not war? *Review of Economic Studies*, 75(3): 865–900.

[16] K Kamin, forthcoming, The impact of conflict on trade: Evidence from panel data.

II. Building resilience to multiple shocks

23. Building resilience to reduce the impact of shocks on developing countries requires a wide range of national and international actions, not only to deal with such impacts when they occur, but also to foster prevention and reduce the risks of shocks ex ante.

A. Economic diversification

24. The most important feature of sustainability transitions is the challenge of economic diversification. Countries will have to change the shape of their economies and the way in which they seek to develop the industries that will power their economies.

25. Building resilience to and managing shocks requires a shift in technological pathways and related investments towards sustainability transitions. Albeit necessary, sustainability transitions may not be risk free and could disrupt long-entrenched markets, create new ones, challenge economic and social systems to adapt at uncomfortable speeds and be accompanied by significant shifts in geopolitical power and relations. While the transitions will be driven primarily by environmental and long-term survival concerns, if not managed well, they will set back the achievement of broader Sustainable Development Goals such as poverty reduction, decent work and economic growth, and reduced inequality.

26. The actual or potential impacts of sustainability transitions on innovation, employment, economic and trade performance are not yet fully understood. Particularly scarce is the analysis of actual and potential impacts of sustainability transitions on developing countries, where economic drivers are often substantially different. Guidance for developing country Governments on managing trade-offs and leveraging co-benefits of sustainability transitions is, therefore, crucial. For example, attempts by Governments to turn green growth into competition over jobs have translated into protectionism, with more than 7,000 trade protection measures implemented by countries since 2009. It increased markedly in 2012, and a new high was recorded in 2016, when 571 of the 771 trade interventions tracked by Global Trade Alert were characterized as discriminatory, and 200 as liberalizing.[17] Data for 2017 point to a continuation of this trend.

27. The Paris Agreement under the United Nations Framework Convention on Climate Change makes economic diversification a shared challenge. For the first time, countries are looking at a collective transformation, not just for individual economies, but for the global economy as well. This transformation will require a massive reallocation of resources at the international level and fundamental structural changes at the domestic level, which would raise many of the equity and distributional concerns that have been central to the work of UNCTAD in the past.

B. Circular economy

28. A variety of business models are being tested, including those based on circularity. A circular economy refers to markets that give incentives to reusing rather than scraping and then extracting new resources. According to some estimates, keeping materials longer in the economy could reduce by 33 percent the carbon dioxide emissions embedded in products.[18] This is not only an opportunity to protect the environment, but to develop new sectors, create jobs, generate income, use resources wisely and develop new capabilities, as well.

[17] See http://www.globaltradealert.org/global_dynamics/flow_all (accessed 9 April 2018).

[18] UNCTAD, forthcoming, Delivering upon the potential of a circular economy in international trade, Policy brief.

29. Circularity requires a bridge between trade in goods and trade in services. The quality, energy efficiency and durability of those goods are higher when a function is delivered as a service. A leased printer, shared car or communal washing machine tends to be more robust and efficient than one that is privately owned. A number of countries are already exploring economic circularity, including Brazil, China, India, Kenya, the Lao People's Democratic Republic and the European Union. India and the European Union are tapping potential savings of $624 billion and €320 billion, respectively.[19]

30. Promoting circularity becomes more challenging in complex products and in longer supply chains. As some countries export industrial products and others have economies that focus more on services, trade results in a net transfer of materials from one region to another. Current trade disputes involving scrap materials serve to underline the actual and potential problem.[20]

C. Multilateral trading system

31. Broad-based economic diversification is unthinkable without trade. The benefits of a diversified export structure have been well established, as countries tend to become what they export.[21] Imports can improve developing countries' access to a wide range of goods, services and technologies that can serve as platforms for economic diversification.

32. At its core, multilateralism remains the first best option for an international trading system to act as a fundamental driver of economic and social transformation. It provides a framework of rules, regulations and guidelines to which all members should adhere, resulting in a level playing field that enables fair and open access to the international trading system for all nations, rich and poor, large and small. The multilateral trading system also provides dispute resolution mechanisms that offer fairness and predictability but more importantly, solutions to commercial conflicts.[22]

33. United Nations Member States have repeatedly declared their commitment to promoting a universal, rules-based, open, transparent, predictable, inclusive, non-discriminatory and equitable multilateral trading system. This is consistent with target 17.10 of the Sustainable Development Goals.[23]

34. Moreover, most emerging issues can no longer be solved unilaterally. The degradation of the oceans or the causes and consequences of climate change that threaten the ability of large numbers of people to lead lives of dignity, should be addressed by world consensus. The issues require concerted and collective actions, and global implementation. The multilateral trading system provides such a framework and forum.

D. Infrastructure

35. All forms of infrastructure [24] are vulnerable to shocks, no matter how well designed, constructed or maintained. As such, Governments need to identify critical infrastructure requiring a higher level of protection. A resilient system of critical infrastructure comprises

[19] Ellen MacArthur Foundation, Sun Institute and Systemiq, 2017, Achieving "growth within", available at https://www.ellenmacarthurfoundation.org/publications/achieving-growth-within; UNCTAD, forthcoming, Delivering upon the potential of a circular economy in international trade, Policy brief.

[20] China has recently taken steps to close its waste and scrap market – the world's largest – to imports. China is considering additional notifications in the future on other scrap materials. It is unclear which materials could join the ban list.

[21] F Kaulich, 2012, Diversification vs. specialization as alternative strategies for economic development: Can we settle a debate by looking at the empirical evidence? Inclusive and Sustainable Industrial Development Working Paper 03/2012, United Nations Industrial Development Organization.

[22] For further discussion on the role of the multilateral trading system and development outcomes, see A/72/274.

[23] See General Assembly resolutions 70/187 and 71/214.

[24] Discussion in this section draws from Economic and Social Commission for Asia and the Pacific, 2013.

both hard infrastructure (buildings or networks, for example) and soft infrastructure (institutions, users, regulations and legislation). Both are increasingly interdependent, so that shocks in one type of infrastructure can trigger system failure across the system. Improving overall resilience therefore involves recognition and management of these interdependencies and requires cooperation by all stakeholders.

36. Although each country has its own specific priorities, lifeline systems, including power, water, wastewater, communication and transportation, are fundamental to support emergency response operations. Further advances in information and communication technologies are helping improve the disaster resilience of communities and people, and bridging the gaps in last-mile connectivity.

E. Social protection

37. Governments can support community resilience primarily by strengthening systems of social protection, such as pensions, benefits, and access to health care. It is crucial to provide a basic social protection floor based on the understanding that all citizens have the right to benefits and that the State has a vital role in ensuring access to, if not in the actual delivery of programmes. At times of economic contraction, social protection systems provide useful countercyclical measures. In addition to protecting the most vulnerable people by supporting consumption, they help smoothen the economic impact of financial crises.

38. Ideally, the strategy should be one of adaptive social protection – integrating social protection with disaster risk reduction and climate change adaptation. In many developing countries, social protection will involve a combination of formal and informal channels – taking advantage of informal connections and systems but supporting these with formal mechanisms where appropriate. Social protection should form part of a long-term socioeconomic security plan, based on a solid foundation of human rights and social inclusiveness, and on a commitment to equitable economic development. Social protection measures are most effective if they are already part of national development strategies; then, if necessary, they can be expanded in times of emergency. They should therefore be designed to be scalable.

F. International frameworks

39. National authorities alone cannot deal with shocks. In a globalized world, such crises now have trans-border implications. Natural disasters too frequently cross national borders and can have international implications wherever they occur. Nowadays, such issues also need to be addressed by collective action, especially regional cooperation.

40. As highlighted previously, a contemporary international framework exists. As in target 1.5 of the Sustainable Development Goals, resilience is also a core feature of target 13.1: "strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries".

41. Building resilience also underpins many other targets: targets 2.4 (agricultural practices), 9.1 (infrastructure), 11.5 (reducing impact of disasters) and 11.b (resilience of cities). Similarly, the Fourth United Nations Conference on the Least Developed Countries, in adopting the Programme of Action for the Least Developed Countries for the Decade 2011–2020, identified "multiple crises and other emerging challenges" as one of the eight interlinked priority areas for the sustainable development of the least developed countries. In 2012, the Secretary-General's High-level Panel on Global Sustainability issued a report entitled "*Resilient People, Resilient Planet – A Future Worth Choosing*", outlining a vision towards sustainable development through inclusive economic growth, environmental development and social equity. Building resilience to shocks is also a key feature of many other frameworks such as the Vienna Programme of Action, the Samoa Pathway and Agenda 2063 of the African Union.

42. So far, however, most collective action has remained at the level of information exchange and dialogue. To truly address the issue of building resilience to shocks, countries must consider the possibility of institutionalization of mechanisms for collective actions, particularly for the most complex shocks and crisis. With regard to resilience to financial shocks, since the triple crisis, UNCTAD has continued its call to further reform the international financial system. Its long-standing proposal has been to establish a cooperative global financial and monetary system "that would assure, on a multilateral basis, the same rules of the game for all parties involved, more or less in the same way as multilateral trade rules apply to any trading partner"[25] and to advance the development agenda by "aligning any new goals and targets to a policy paradigm that can … establish a stable international financial system that boosts productive investment...".[26] In terms of the institutional framework to support this, the notion of "a truly comprehensive and inclusive international financial institution – a world financial organization" has previously been proposed.[27]

43. The response at the international level, as at the national level, will depend on the existing capacities and priorities of member States, as well as the type of shocks being addressed. In each case, consideration should be given as to whether the necessary actions constitute adjustments to existing, often disparate, arrangements, or instead complete reform and the establishment of new institutions. However, this new framework of multilateral cooperation is organized, comprehensive programmes of technical assistance will be needed to build resilience as a complement to multilateralism, particularly in support of the efforts of small island developing States, landlocked developing countries and least developed countries.

III. Suggested policy recommendations

44. The Trade and Development Board may wish to consider the following recommendations:

(a) For resilience-building policies to be most effective, policymakers should identify and analyse the actual or potential impacts of sustainability transitions on innovation, employment, economic and trade performance;

(b) It may be preferable to ensure against shocks by focusing environmental, trade and social policies increasingly on workers and communities rather than on particular jobs and sectors;

(c) It is important to identify critical infrastructure that requires a higher level of protection from shocks, including certain lifeline systems, which are fundamental to support emergency response operations;

(d) Systems of social protection should be strengthened to provide buffers to shocks, especially for particularly vulnerable segments of the population. These systems should be made adaptive – integrated with disaster risk reduction and climate change adaptation – and scalable;

(e) Steps should be taken to establish a cooperative global financial and monetary system that would ensure, on a multilateral basis, that the same rules of the game are applied to all parties concerned, just as multilateral trade rules apply to all trading partners.

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[25] See http://unctad.org/en/pages/PressReleaseArchive.aspx?ReferenceDocId=10791 (accessed 10 April 2018).

[26] UNCTAD, 2014, *Trade and Development Report, 2014: Global Governance and Policy Space for Development* (United Nations publication, Sales No. E.14.II.D.4, New York and Geneva).

[27] See http://unctad.org/en/pages/SGStatementArchive.aspx?ReferenceItemId=16559.